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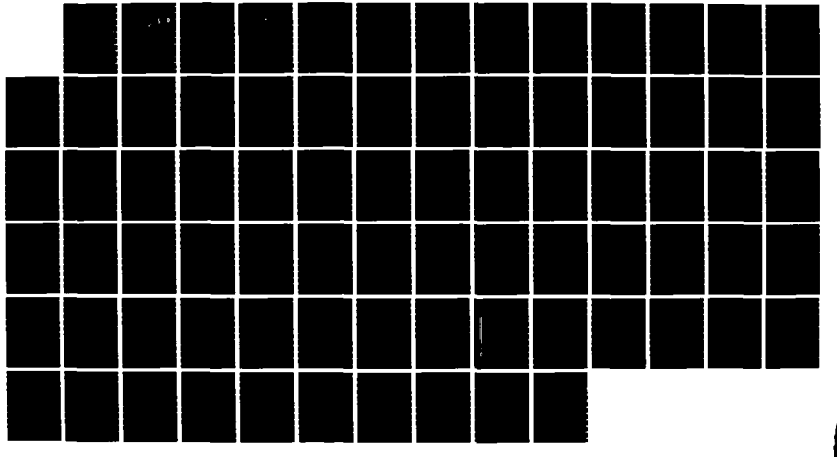

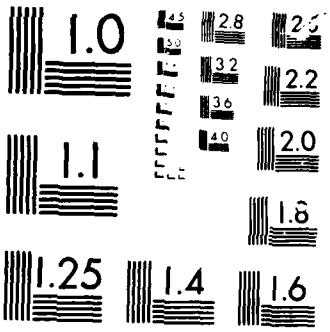
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# AIR COMMAND AND STAFF COLLEGE

## STUDENT REPORT

COMPARISON OF JOB ATTITUDES BETWEEN PHYSICIANS, NURSES, OTHER MEDICAL OFFICERS, AND OTHER AIR FORCE OFFICERS

MAJOR PATSY C. ADKISON 86-0025

*"insights into tomorrow"*

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TITLE COMPARISON OF JOB ATTITUDES BETWEEN PHYSICIANS, NURSES, OTHER MEDICAL OFFICERS, AND OTHER AIR FORCE OFFICERS

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Submitted to the faculty in partial fulfillment of requirements for graduation.

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Within the Air Force community, a diverse group of physicians, nurses, and other medical officers enter with attitudes and behaviors which contribute significantly to the overall quality of patient care. The purpose of this research project was to explore the job attitudes of the military medical professionals. The study concludes that job attitudes of the nurse corps were significantly low across all factors of the survey whereas the physicians were high in mission resources but expressed lower attitudes in leadership effectiveness. Air Force officers were similar to nurses in the areas of mission resources and unit effectiveness, but similar to other medical officers in the areas of leadership effectiveness. To enhance leadership effectiveness, medical leaders in mid/top management positions should recognize and promote leadership skills early in newly commissioned nurses and medical officers.

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# PREFACE

This research paper was compiled with multiple purposes in mind. The first was to satisfy the author's curiosity about the job attitudes of physicians and nurses in the Air Force medical career field. There are very few surveys of physicians and nurses providing attitudinal assessments of their management/leadership roles. The second was to document the Leadership and Management Development Center (LMDC) survey results, due to the research and consultation programs being terminated. The third was to provide some feedback to leaders and managers within the medical career field. The fourth was to fulfill a requirement for graduation from Air Command and Staff College. And the last, this material is being submitted to the faculty of the Graduate Division, Troy State University in partial fulfullment of the requirements for the Degree Master of Science in Counseling and Human Development.

As required by LMDC, the project sponsor, this report is written in their version of the style prescribed by the American Psychological Association.

I am indebted to many individuals who provided support in the completion of this paper. To my advisor, Capt Richard Brown, to my sponsor, Major Mickey Dansby, to Dick Suski, a sincere friend and classmate, to Ms. Joan Hyatt of Air University Library, and to my professor, Dr. Samuel E. Dautch at Troy State University.

# ABOUT THE AUTHOR

Major Patsy C. Adkison was commissioned in the Air Force Reserve Nurse Corps in 1972. She attended Officer Basic Military Training and Flight Nurse Course in sequence the same year. Her first assignment was with the 73rd Aeromedical Evacuation Squadron, Tinker AFB, Oklahoma. In 1973, she transferred to the 72nd Aeromedical Evacuation Squadron, McGuire AFB, New Jersey where she quickly qualified to her highest crew position as Flight Nurse Examiner with over 1000 hours in the C-141A aircraft. In 1974, she was named Outstanding Nurse of the Year by Headquarter Air Force Reserve (HqAFRES) Eastern Region. Major Adkison was assign to HqAFRES Recruiting and Retention Service, Robins AFB, Georgia as Chief to the Retention Branch in 1976. During this time, she worked closely with Reserve Career Advisors developing the Retention Incentive Program for Reserve personnel. On August 1977, she transferred to the 37th Aeromedical Evacuation Group as Training Officer and was employed by Civil Service as the (Nurse) Air Reserve Technician for the unit. In 1983, she was named HqAFRES Outstanding Officer Air Force Reserve Technician of the Year. Major Adkison completed Squadron Officer School in 1978 by correspondence and Air Command and Staff College in 1980 by correspondence. She has attended the Air Force Battlefield Nurse Course (1982), Academic Instructor School (1982), and Reserve Nurse Management Course (1985). Presently, she is attending Air Command and Staff College in residence, class of 1986.

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# EXECUTIVE SUMMARY

Part of our College mission is distribution of the students' problem solving products to DoD sponsors and other interested agencies to enhance insight into contemporary, defense related issues. While the College has accepted this product as meeting academic requirements for graduation, the views and opinions expressed or implied are solely those of the author and should not be construed as carrying official sanction.

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REPORT NUMBER 86-0025

AUTHOR(S) MAJOR PATSY C. ADKISON, USAFR

TITLE COMPARISON OF JOB ATTITUDES BETWEEN PHYSICIANS, NURSES, OTHER MEDICAL OFFICERS, AND OTHER AIR FORCE OFFICERS

I. Purpose: To analyze significant attitudinal differences among medical officer groups (physicians, nurses, and other medical officers) and other Air Force officers.

II. Background: Within the Air Force community, the medical career field is a vital and integral part of the organization. It provides medical support to its members by maintaining a capable, effective readiness force. Within this organization, a diverse group of physicians, nurses, and other medical officers enter with attitudes, values and behaviors which contribute significantly to the overall organizational climate. The organizational climate in which the people work can greatly influence their motivation and satisfaction. Air Force medical leaders are in the position to create an atmosphere to facilitate unity and cohesiveness in the workplace. The Leadership and Management Development Center (LMDC) at Maxwell AFB, Alabama, and the Air Force Human Resources Center designed a 109-item Organizational Assessment Package (OAP) survey as a research instrument to aid in understanding the job attitudes of personnel in the Air Force. The factors measured by the OAP are grouped into a systems model to assess three aspects of a work group: mission/resources, leadership effectiveness and unit effectiveness. OAP data gathered in LMDC consultant visits were analyzed in the present report.

# CONTINUED

III. Procedures: The following steps were taken in the present research:

1. Current research and theory on the medical professional (physicians, nurses, and other medical officers) were reviewed and a number of attitudinal variables were identified which should be related to work variables for the military professional.

2. Two separate examinations were conducted in the OAP analyses. The first examination was an analysis of demographic information for each group using the SPSSX program "Crosstabs." The second examination was a comparison of job attitudes which analyzed scores on the OAP attitudinal factors for possible statistical differences among the comparison groups.

3. For the comparison of job attitudes one-way analyses of variance (ANOVAs) were performed to determine whether attitudinal differences existed among groups. The critical F-value level of significance was set at alpha = 05 (e.g., the 95% confidence level). Also, the Student Newman-Keuls test was employed as a multiple-range test to determine which specific groups were statistically different from each other. These procedures were used to determine factors where medical personnel's responses varied significantly from the data base and from each other.

IV. Results. In the mission/resources area other medical officers and physicians were more positive than nurses and other Air Force officers. In the leadership effectiveness area other medical officers and other Air Force officers demonstrated more positive perceptions than physicians and nurses. Nurses were the least positive overall. Other medical officers were the most positive in the unit effectiveness areas.

V. Conclusions.

1. There were significant differences in job attitudes in the medical field. As measured by the OAP, other medical officers expressed a more positive attitude

towards their jobs in the Air Force. Likewise, the physicians had a more positive attitude except in the leadership effectiveness factor. The nurses were generally less positive in all factors in job attitude.

2. Future researcher's should break down the diversified subjects into specific AFSCs such as grouping clinical nurses in one group, all internists in one group, etc. This would narrow the subjects into more homogeneous groups so results can be clearly interpreted and solutions can be implemented.

VI. Recommendations:

1. Hospital commanders must divorce themselves from the "bedside" role (to a certain degree) and step into a leadership role. This should include guiding younger physicians entering the medical corps, recognizing potential leadership, and rewarding physicians by encouraging advanced schooling or publishing articles for the medical journals.

2. The present nurse leaders should be made aware that their self-perception is important to younger nurses entering the Air Force. By these nurse-leaders being assured of their roles, they in turn can offer positive feedback to junior nurse officers to help them grow into future leadership roles.

3. The present nurse internship program for newly commissioned nurses should be continued to orient the new nurses entering the Air Force. This offers the first stage of leadership and confidence building in their Air Force nursing careers.

4. Medical leaders should attend management courses to enhance their perspectives and to keep abreast of today's management styles.

5. Within the hospital setting, quarterly ward/department "How Goes It" meetings should be held to air problems. Some problems can be resolved while others cannot, but if the personnel are aware that the problems are being recognized they would know management is trying on their behalf.

6. Incentive programs (such as Physician/Nurse of the Month) should be encouraged among the departments to add a sense of pride to the organization by recognizing individual contributions to the overall mission.

Chapter One

# INTRODUCTION

The medical career field is a vital and integral part of the Air Force. It provides the medical support needed to maintain the highest possible degree of combat readiness and effectiveness, according to the Air Force Regulation (AFR 168-4), " Administration of Medical Activities." It is one of the largest career fields with approximately 4,000 physicians, 4,600 nurses and 5,000 other medical officer personnel performing patient care in the Air Force health care delivery system (Air Force Association, 1985). The purpose of the present research project is to explore the job attitudes of this diverse group of military medical professionals.

Within the hospital staff configuration, there are many professionals involved in patient care: physicians, nurses, and other medical personnel. A physician's role involves diagnosing patient problems and performing administrative duties. Nurses carry out task-oriented medical duties such as administration of ward duties, planning daily patient care and transcribing physician orders, etc. Other medical personnel such as dentists, biomedical sciences, and health services personnel make up the ancillary services in the hospital setting. Some of the hospital staff will have more contact with the patient, such as the nurses, nursing assistants, and medical service technicians, while others of the health team may render short-term interviews from a

distance, such as the dietitian or the administrative staff. Thus, the total medical professional team provides a productive health care delivery system in caring for the patient.

This diversified group of medical professionals require social as well as technical skills when providing patient care. Actions, attitudes, and behaviors contribute significantly to the overall quality of patient care (Hogan, Hogan, & Busch 1984). These social skills include treating patients and co-workers with courtesy, consideration, and tact; being perceptive about patient's needs; and being able to communicate accurately but pleasantly. Conversely, personnel who are irritable, thoughtless, cranky, imperceptive, and abrasive not only upset patients but also tend to erode the morale of the staff with whom they work. Thus, the attitudes of individuals within a specific relationship greatly affect personal and professional interactions (Moloney, 1979).

Although the nurse relieves the physician from task-oriented roles, tasks or stress factors increase within an environment where many stressful job situations (such as emergencies, unexpectedly heavy work assignments, breakdowns in communications and interrelationships, nursing errors, and conflicts with physicians or supervisors) arise. Douglass and Bevis (1983) state members should discuss stressful work factors and their feelings about them as soon after an incident as possible, thus decreasing the accompanying anxiety and allowing the daily work to progress smoothly, especially in high stress areas, such as the intensive care unit, cardiac care unit, emergency room, and surgery. These high stress areas are addressed more in the literature review.

The purpose of this report is to provide Air Force hospital commanders and health service administrators with usable feedback on job attitude scores of

medical personnel obtained through the use of the Organizational Assessment Package (OAP) survey The OAP survey was designed to identify organizational leadership and management strengths and weaknesses, provide feedback to Air Force professional military education schools, and establish a data base in support of Air Force-wide organizational effectiveness research efforts (Short, 1985). Using OAP data, this report analyzes the job attitudes of officer personnel within the medical career field as compared to officer personnel in other career fields in the Air Force. There are four objectives of this report:

1. To review relevant background research and organizational behavior literature;

2. To compare OAP-measured demographic characteristics and job attitudes of physicians, nurses, and other officer personnel in the medical career area with the attitudes of officer personnel in other Air Force specialties;

3. To analyze significant attitudinal differences between medical personnel groups and other Air Force personnel and;

(4) To develop recommendations concerning work issues for medical leaders.

These objectives are addressed in the following manner. First, Chapter Two shows the results of the literature review, emphasizing those variables that appear to have the greatest theoretical and practice significance. Next, Chapter Three presents the methodology of the OAP survey procedures as well as the procedures used to obtain the results for this report. Chapter Four compares OAP results for medical career field groups with OAP results for other Air Force officers. Demographic and attitudinal results are presented separately for physicians, nurses, other medical officers, and officers in other Air Force career

areas. Chapter Five presents discussion of the significant differences between medical personnel and other personnel. Comparisons are made with results of previous researchers' analyses, and explanations for significant differences are proposed when possible. Chapter Six gives conclusions and recommendations for hospital commanders, chief nurses and health supervisors. Inferences are drawn from the results as to how medical personnel and leaders can capitalize on attitudinal strengths and compensate for attitudinal weaknesses.

## Chapter Two

## LITERATURE REVIEW

Medical leaders within the hospital environment are the people who establish the organizational climate. An important factor in understanding organizational climate includes understanding the leadership style of the leader, his or her knowledge of motivational rewards and incentives and the extent to which he or she shows consideration and support (Moloney, 1979). The organizational climate in which people work can greatly influence their motivation and satisfaction (Friedlander & Marguities, 1969; Litwin & Stringer, 1968). Burns and Stalker (1961) define organizational climate in relation to structure in terms of a "mechanistic-organic continuum." These researchers described the mechanistic organization as having a tightly knit structure, rigid rules, low mutual trust among members, and usually a downward communication flow. Conversely, organic organizations display loose structures, a communication flow that moves toward colleagues and top administration as well as downward to subordinates, and high mutual trust among all co-workers. In the military hospital setting, the organizational climate depends primarily on the leadership style of the hospital commander.

The hospital commander is responsible for overall hospital operations. Each department head within the hospital is responsible for specific services that interrelate to each other, such as administration, nursing service, and support

services. Whereas the hospital staff possesses the technical knowledge to make decisions regarding patient care and treatment, hospital leaders must make decisions regarding the welfare of their organization. These leaders are in the position to create the atmosphere to facilitate unity and cohesiveness in the workplace.

Physicians, nurses, and other medical officers have diverse roles which influence their attitudes within the hospital. These attitudes are reflected in the degree of freedom to perform their work unrestricted by rules and regulations. Physicians have the latitude of movement within the hospital setting. As the physician makes patient rounds, he or she is more in a people-oriented role than a task-oriented role. He or she does not have a static role that becomes routine. Nurses are usually in a subservient role to the physician. Also, nurses are confined to a specified nursing unit without the versatility of movement. The role of other medical officers is interrelated throughout the hospital structure. They may visit the patient in a consultation role (i.e., dietary consultation) or if the physician has ordered a specific treatment such as respiratory treatment or physical therapy. Therefore attitudes seem to differ between physicians, nurses, and other medical officers.

Although minimal study has been done on physicians' attitudes, there is abundant literature on nurses' job attitudes. Most research concentrates on personal and environmental sources of stress (or burnout). Stress is often defined in terms of a relationship between a person and the environment (Ivancevich & Matteson, 1984). Consequently, where either an environmental (hospital unit's) demand exceeds a person's response capability or the person's response capability exceeds the environmental demand, the resulting misfit

produces stress. The nurse is more prone to occupational stress when working in a hospital's intensive care unit, emergency room, cardiac care unit, and surgery (West, Horan & Games, 1984). The performance requirements of these jobs expose the nurse to stressful stimuli that (if perceived as such) will ultimately take their toll on the individual's physical and/or mental health. Witness, for example, Hay and Oken's (1972) description of a hosital's intensive care unit:

> As part of her [sic] daily routine, the nurse must reassure and comfort the man who is dying of cancer, she must change the dressings of a decomposing, gangrenous limb; she must calm the awakening disturbed "overdose" patient; she must bathe the genitalia of the helpless and comatose; she must wipe away the bloody stool of the gastrointestinal bleeder; she must comfort the anguished young wife who knows her husband is dying. It is hard to imagine any other situation that involves such intimacy with the frightening, repulsive and forbidden. Stimuli are present to mobilize literally every conflictual area at every psychological development level. (p.110)

In these work areas, where nurses who are overcommitted and overdedicated are at risk, those who take on too much for too long will stress (burn) out. Other factors include internally and/or externally imposed pressure to succeed or to always be right, few interests outside of work, and considering oneself the only person able to do the job (Buechler, 1985). Some approaches to prevent or alleviate burnout would be support groups that focus on sharing experiences and feelings, on mutual understanding and acceptance, and on alternatives for dealing with problems and concerns.

Nurses are too valuable to lose from the profession. The Air Force conducted occupational surveys to determine current and future nurse requirements. These two occupational survey reports from the Occupational Research Division at Lackland AFB, Texas were part of a comprehensive experimental program developed in cooperation with the Nursing Resources Study

Group appointed by the Air Force Surgeon General. The first report (McFarland, 1974) addressed the occupational analysis of 1,996 enlisted personnel in the medical career field and placed their jobs into meaningful job types. The job inventory was broken down into 25 tasks unique to the medical service utilization field. The results showed that medical service specialists were not given enough responsibility for inpatient care. They performed more janitorial duties rather than interacting with either patients or professional medical personnel. They complained about not being utilized for what they were trained to do. They were willing to accept more responsibility and learn new tasks to improve patient care, should reduction in the number of professional medical personnel occur.

The second report (McFarland, 1976) made direct comparisons between tasks performed by 3,115 nurses and medical service corpsmen and provided an analysis of the relative difficulty of task performance and job satisfaction. This study was conducted when manning levels of military physicians were decreasing and special training programs were being developed to use other health service personnel. Programs such as the pediatric nurse practitioner program were instituted to reduce Air Force pediatricians' work loads. The job inventories included ratings of task statements as well as background information such as name, base, grade, length of time in military service and certain job attitudes These were an integral part of the comparative job analysis. The results indicated the Air Force had plenty of resources (nurses and medical service corpsmen) to fill gaps resulting from physician shortages.

To maintain a higher retention rate in the Nurse Corps, chief nurses of the Air Force developed nursing internship programs for beginning practitioners. Latham (1985) revealed that new graduates entering the Air Force were weak in

the areas of planning and managing. These weaknesses caused frustration and high turnover in the Nurse Corps. The internship program provided guidance in specialized skills in the medical-surgical inpatient schedule. The use of judgment, autonomy, cognitive skills and decision-making were strongly encouraged. Thus, proficiency in performing nursing procedures became de-emphasized in favor of proficiency in administrative skills. The Air Force internship program provided a better introduction to the military nurse's role than the traditional orientation given to initial active duty nurses. When adequate orientation programs are provided, job dissatisfaction and turnover rate appear to be reduced.

The present study uses the preceding information and OAP survey results to provide a more comprehensive understanding of the job attitudes of physicians, nurses, and other medical personnel in relation to their jobs within the organizational environment of the Air Force hospital. Previous research showed that job attitudes are important to the physician, nurse, and other medical personnel when rendering care to the ill patient within the confines of the hospital environment. It is expected that nurses' job attitudes will be less favorable than those of physicians and other medical personnel because of a lack of management/supervisory skills, rotating shifts, confinement to ward duty, and higher stress level in critical care units. The next chapter explains the methods used to obtain the data upon which this report is based.

Chapter Three

# METHOD

The primary purpose of this study is to provide Air Force commanders and medical leaders with analyses of Organizational Assessment Package (OAP) survey data to help them identify strengths as well as potential problem areas in the medical career field. In this study, responses of four groups of Air Force people (physicians, nurses, other medical officers, and officers in other Air Forces specialties) are compared.

## Instrumentation

The OAP is a 109-item survey questionnaire designed jointly by the Air Force Human Resources Laboratory and the Leadership and Management Development Center (LMDC). Results of individual factor analyses in the OAP development are in Hendrix and Halverson (1979a, 1979b). Evidence of validity of the OAP data gathering instrument is found in several studies (Hightower & Short, 1982; Short & Hamilton, 1981). The survey aids LMDC in its mission to (a) conduct research on Air Force systemic issues using information in the OAP data base, (b) provide leadership and management training, and (c) provide management consultation services to Air Force commanders upon request. The factors measured by the OAP are grouped into a systems model to assess three aspects of a work group: Mission/Resources, Leadership Effectiveness, and Unit Effectiveness. The survey (see Appendix C) consists of 16 demographic items and

93 attitudinal items. Responses to the attitudinal items are made on a scale of 1 to 7. A response of 1 usually indicates a strong dissatisfaction or disagreement with the specific statement or question, and a response of 7 usually indicates a strong positive feeling. The survey's 109 items are divided into seven sections. The background information section contains 16 demographic items about the individual respondent. The next section, job inventory, presents 34 items related to job complexity (such as job goals, autonomy, personal growth and similar items). The third section contains seven items on desired job characteristics. The fourth section focuses on supervision, and contains 19 items on leadership and managerial traits of the respondent's supervisor. The fifth section, work group productivity, contains five items dealing with the quantity and quality of the work produced by the respondent's work group. The organizational climate block has 19 items concerning the respondent's relationship with squadron or staff agencies. Finally, the job satisfaction section contains nine items dealing with the work environment.

## Data Collection

Data for the present study came from survey administrations of the OAP conducted as part of LMDC's management consultation program. Consultation began when a commander, interested in attitude information on unit personnel, formally requested LMDC to visit his or her organization. A team from LMDC then came to the organization and administered OAP surveys to all available personnel during group survey sessions. Normally, the data gathering process took place during a one or two week period. If unit members were unavailable for duty (e.g., TDY, on leave), no attempt was made for them to make it up. All participating personnel were promised individual anonymity of their survey responses. Since

the organizations were not selected at random, this survey administration process provided an opportunity sample or a sample of convenience, from an Air Force perspective. However, a number of such "mini-censuses" were conducted resulting in a cumulative data base representing a large portion of the Air Force.

After the data gathering phase, the LMDC teams returned to Maxwell AFB to analyze the data and prepare reports for their return visit to the commanders who had requested the survey. In six weeks a return visit focused on the unit's OAP survey results. Areas such as supervision, communication, career intentions and a range of leadership and management issues were discussed. During this phase, LMDC team members conducted (by request) workshops and seminars or worked with individual supervisors.

Results of the OAP Survey from each unit are added to a cumulative data base containing over 100,000 active records. Active records for the present report reflect data collected from 1 October 1981 through 16 September 1985. Records of surveys collected prior to October 1981 are maintained in separate inactive files and were not used in this study.

## Subjects

Air Force personnel are job-coded by an Air Force Specialty Code (AFSC). Duties and responsibilities of the officer medical career area are found in AFR 36-1, "Officer Classification." Each AFSC listing has a summary of qualifications for the specialty code. In this study, Air Force personnel's AFSCs were classified into four groups as shown in Table 1. The medical groups consisted of physicians, nurses, and other medical officers, a fourth group consisted of all other Air Force officers. Sample sizes for the four groups are indicated in Table 2.

Table 1

AFSC Grouping of Subject Groups

Physicians

| | |
|---|---|
| 93XX | Family Physician, Aerospace Medicine Physician, Pediatrician, Internist |
| 94XX | Surgeon, Urologist, Ophthalmologist, Orthopedic Surgeon, Obstetrician/Gynecologist |
| 95XX | Allergist |

Nurses

| | |
|---|---|
| 97XX | Nurse Administrator, Mental Health Nurse, Operating Room Nurse, Nurse Anesthetist, Clinical Nurse, Nurse Midwife, Environmental Health Nurse |

Other Medical Officers

| | |
|---|---|
| 90XX | Health Services Administrator |
| 91XX | Biomedical Laboratory Officer, Clinical Social Worker, Clinical Psychologist |
| 92XX | Dietitian, Occupational Therapist, Physical Therapist, Pharmacist, Optometrist, Biomedical Specialist, Physician Assistant, Environmental Health Officer |
| 98XX | Oral Surgeon, Periodontist, Prosthodontist, Orthodontist |
| 99XX | Veterinary Clinical Specialist |

Other Data Base Officers

| | |
|---|---|
| Other AFSCs | This group was all other Officer AFSCs in the data base. They perform in a wide range of jobs. |

Table 2

Sample Sizes of Comparison Groups

| Physicians | Nurses | Other Medical Officers | Other Data Base Officers |
|---|---|---|---|
| 322 | 567 | 577 | 8118 |

## Procedures

Two separate examinations were conducted in the OAP analyses. The first examination, "Analysis of Demographic Information," is provided to characterize the groups. The second examination, "Comparison of Job Attitudes," compares group attitudinal means for possible statistical differences.

The letter, n, shown throughout the tables of this research is the number of valid responses in the data base for specific factors or demographic variables being examined. Interested readers are directed to SPSSX user's guide (1983) for an explanation of the statistical analyses used.

### Analysis of Demographic Information

For this analysis, the LMDC data base was divided into the four previously described groups: physicians, nurses, other medical officer personnel, and officer personnel in the rest of the Air Force. SPSSX program "Crosstabs" was used to analyze the data.

### Comparison of Job Attitudes

For these analyses, attitudinal scores on the OAP factors for medical officers were compared to data base officer scores and to each other (e.g., comparisons among physicians, nurses, other medical officers, and other Air Force

officers). Analyses of variance (ANOVAs) were used to determine whether overall attitudinal differences existed between groups. The critical F-value level of significance was set at alpha = .05. When appropriate, the Student Newman-Keuls test was employed as multiple-range test to determine which specific groups were statistically different from each other. These procedures were used to determine factors where medical officers' responses vary significantly from data base officers' responses and from each other. Comparisons were made in three separate categories:

1. Mission/Resources. This category is concerned with the task properties and environmental conditions of the job. It measures perceptions of task characteristics.

2. Leadership Effectiveness. Assesses the effectiveness of supervisors and the process of accomplishing the work.

3. Unit Effectiveness. Measures task performance, group development, and effects of the work situation in group members. Assesses quality and quantity of task performance. Pride and job satisfaction are assessed.

The next chapter presents the results of the demographic and attitudinal comparisons.

Chapter Four

# RESULTS

The results of the comparisons between physicians, nurses, other medical officers, and other Air Force officers are presented in this chapter. First is the analysis of demographic information about the personnel groups who responded to the OAP survey. Detailed demographic data are provided in Tables A-1 through A-19, Appendix A. Next, the attitudinal comparisons by category (physicians, nurses, other medical officers and other Air Force officers) are presented in three areas of organizational functioning: Mission/Resources, Leadership Effectiveness, and Unit Effectiveness. The results of these comparisons are shown in Table B-1, Appendix B.

## Analysis of Demographic Information

The following brief summary highlights notable demographic differences on the OAP data base between physicians, nurses other medical officers, and other Air Force officers. The physician career field is predominately male with only 8% female. The typical physician respondent is from 26 to 35 years of age, and has more than 4 years in the Air Force. Sixty-six percent have been in their present career fields over 36 months. Most physicians have been at their present duty stations and in their current positions for 18 to 36 months. More than 80% are white, 7% black, and 4% hispanic. The typical physician is married, with 33% of the spouses (9% are military members) working outside of the home. Less than 3% have completed Squadron Officer School, only 4% have completed an intermediate

service school course (e.g., Air Command and Staff College), and over 4% have completed a senior service school (e.g., Air War College) as their highest level of PME. The typical physician respondent directly supervises one or more people. Fifteen percent are not sure who writes their own officer effectiveness reports. Fifty percent work the day shift, 28% have irregular shift, and 21% have a lot of TDY or on-call status. Forty percent of the physicians' supervisors hold weekly group meetings. Twenty-seven percent of the physicians possess an aeronautical rating. Forty percent indicated they would likely, or definitely, make the Air Force a career.

Seventy-eight percent of registered nurse respondents are female, while only 22% are male. The typical registered nurse respondent is 26 to 35 years old, and has more than 4 years in the Air Force. Sixty-two percent have been in their present career fields over 36 months. Most nurses have less than 3 years at their present duty stations and in their current positions. More than 86% are white, 6% are black, and 3% hispanic. Over 54% of the nurses are married, of which 38% are married to a military member. Thirty-six percent of their spouses are employed in the civilian sector. More than 65% have a bachelor's degree, but less than 15% have a master's degree. Less than 23% have completed Squadron Officers School, 11% have completed an intermediate service school (e.g., Air Command and Staff College), and less than 3% completed a senior service school, such as Air War College, as their highest level of PME. The typical nurse respondent directly supervises one or more individuals. Nurses' work schedules include 39% rotating shifts, 35% day shift, and less than 20% irregular shift. Forty-four percent of the nurses' supervisors hold monthly group meetings. Less than 5% are flight nurses

currently on nonrated aircrew duty flying status to fly aeromedical evacuation missions.

The other medical officer respondents are typically 26 to 35 years old, with 40% having over 12 years in the Air Force. Sixty-eight percent have been in their present career fields over 36 months. Most other medical officers remain at their present duty stations and in their current positions for 18 to 36 months. More than 90% are white, less than 4% are black, and less than 3% hispanic. Eighty percent are married, with fewer than 40% of their spouses (over 5% are military members) employed outside the home. Over 69% of the other medical officers have a master's or doctoral degree. More than 24% have completed Squadron Officer School, 17% have completed an intermediate service school (e.g., Air Command and Staff College), and 11% have completed a senior service school (e.g., Air War College) as their highest level of PME. For over 80%, their immediate supervisors write their appraisal reports. Eighty-eight percent work the day shift. Their supervisors typically hold weekly group meetings. Less than 52% indicate they will definitely make the Air Force a career.

The other Air Force officer respondents are typically 26 to 30 years old, with 40% having over 12 years in the Air Force. Fifty-three percent have been in their present career field over 36 months. Most of the other Air Force officers have remained at their present duty stations and in their current positions for 18 to 36 months. More than 89% are white, less than 6% are black, and 2% hispanic. Seventy-seven percent are married, with fewer than 36% of their spouses (over 7% are military members) employed outside the home. Over 56% of the other Air Force officers have a bachelor's degree. Twenty-eight percent have completed Squadron Officer School, 24% have completed an intermediate service school (e.g.,

Air Command and Staff College), and less than 14% completed a senior service school (e.g., Air War College) as their highest level PME. For 78%, their supervisors write their appraisal reports. Less than 62% work the day shift. Their supervisors typically hold weekly group meetings. Less than 52% indicate they will definitely make the Air Force a career.

There are only a few obvious demographic differences between medical officers and other Air Force officers in the data base. Officer career fields are predominately male, having only 8% to 10% females (with exception of the Nurse Corps which has over 78% females). There is a lower proportion of married nurses (54%) as compared with the other officer groups (77% to 87%). Married nurses, though, are much more likely to be married to a military spouse. Only 15% of the nurse respondents have an advanced degree as compared to 42% of other Air Force officers and 69% of other medical officers. Other medical officers and other Air Force officers typically work a day shift while about half the physicians work irregular or on-call hours and over 58% of the nurses work either rotating or irregular shifts. Other Air Force officers are also much more likely to have an aeronautical rating status.

## Analysis of Attitudinal Information

The analyses of variance (ANOVA) was employed to detect differences among group means. Statistical differences were tested at the 95% confidence level. The Student Newman-Keuls test was used as a follow-up test to determine which groups were significantly different from each other at the 95% confidence level. In the tables, groups not identified as being in the same subset are significantly different from each other at the .05 probability level (Table 3, Appendix B). A summary of significant group differences is provided in Table 3

Mission/Resources

Across all Mission/Resource factors, other medical officers and physicians were more positive than nurses and other Air Force officers. Physicians and other medical officers indicated higher Job Performance Goals and Job Related Training factor scores as compared to nurses and Air Force officers. All groups were different from each other on Task Characteristics, with physicians highest, other medical officers second, nurses next, and other Air Force officers last. For Task Autonomy, other medical officers were highest followed in order by physicians, other Air Force officers, and nurses.

Leadership Effectiveness

Generally, other medical officers and other Air Force officers demonstrated more positive perceptions than physicians and nurses in the Leadership Effectiveness area. Both other medical and other Air Force officers were more positive than physicians or nurses in Work Support. Other medical officers had more positive Supervisory Communications Climate responses than nurses. Ratings of Organizational Communication Climate were highest for both other medical and other Air Force officers, followed by physicians, with nurses last. There were no significant differences between the four groups on Management and Supervision.

Unit Effectiveness

Overall, nurses were the least positive and other medical officers the most positive in the Unit Effectiveness area. Other medical officers scored highest in Advancement and Recognition, followed by other Air Force officers, with nurses and physicians last. Other medical officers also rated Job Related Satisfaction highest, physicians, with nurses and other Air Force officers last. Nurses and

Table 3

Summary of Significant Differences Between Physicians (MDs), Nurses (RNs), Other Medical Officers (Med), and Other Air Force Officers (AF)

| | | | | |
|---|---|---|---|---|
| MISSION/RESOURCES | | | | |
| Job Performance Goals | AF | RNs | Med | MDs |
| Task Characteristics | AF | RNs | Med | MDs |
| Task Autonomy | RNs | AF | MDs | Med |
| Job Training | RNs | AF | MDs | Med |
| LEADERSHIP EFFECTIVENESS | | | | |
| Work Support | MDs | RNs | AF | Med |
| Supr Comm Climate | RNs | MDs | AF | Med |
| Org Comm Climate | RNs | MDs | AF | Med |
| UNIT EFFECTIVENESS | | | | |
| Pride | AF | RNs | Med | MDs |
| Advancement/Recognition | RNs | MDs | AF | Med |
| Work Group Effectiveness | RNs | AF | MDs | Med |
| Gen Org Climate | RNs | MDs | Med | AF |
| Job Related Satisfaction | RNs | AF | MDs | Med |

Note. Groups not in the same subset (not underlined) are significantly different at the .05 probability level. The groups' order of precedence is lowest on left with the highest on right.

other Air Force officers reflected a less positive view on Pride and Work Group Effectiveness than physicians and other medical officers. For General Organizational Climate, other medical and Air Force officers were the most positive, followed by physicians, with nurses last. A discussion on these results is provided in Chapter 5.

## Chapter Five

## DISCUSSION

Actually, there were few unexpected differences indicated by the results of this study. This diverse group of medical professionals within the Air Force health care delivery system also expressed their perceptions in a diverse manner. The means of the groups ranged from 4.25 to 5.96 where a "4" represents a response of "neither agree nor disagree" and "6" represents a response of "moderately agree." Thus, average responses ranged from neutral to positive. Possible interpretations of differences in means are discussed in the OAP areas by examining the results for the physicians, nurses, other medical officers and other Air Force officer comparisons. The three OAP areas addressed in this chapter are Mission/Resources, Leadership Effectiveness, and Unit Effectiveness. Factors within each area are discussed to show where attitudes differ and provide possible reasons why the differences exist among the four groups.

### Mission/Resources

Within the Mission/Resources area, four factors are concerned with work itself. Work itself has to do with the task properties and environmental conditions of the job. The factors assess the patterns of characteristics members bring to the group or organization, and patterns of differentiation and integration among positions and roles.

Both physicians and other medical officers expressed a more positive view than the nurses and other Air Force officers toward their Job Performance Goals.

The physicians' and other medical officers' tasks are usually clearly defined, specific and realistic in the care they provide to patients. This is reflected by the relatively high perception of their Task Characteristics. Additionally, physicians and other medical officers viewed their jobs as having greater autonomy. They have more latitude of mobility within the hospital environment, and are not confined to daily tasks that become repetitious. They have the freedom to use their talents and skills in recommending different treatments in promoting patient health. A sense of accomplishment is provided to the physician when a patient is discharged from the hospital because they contributed to the patient's well-being.

Nurses, however, are not required to make major decisions to perform their jobs. They are usually assigned to a specific patient unit (ward) with long-term patients. They must consult with the physician before taking action if a patient's condition worsens. The standards of nursing service are usually clear and specific, but the freedom to make decisions on the major patient issues is limited. Nurses have little freedom or independence in their work schedules as reflected in their lowest score among all groups in Task Autonomy. A hospital must function on a 24-hour basis and must be manned on three different shifts for patient coverage (7a.m.-3p.m.; 3p.m.-11p.m.; 11p.m.-7a.m.; times may vary). If a nurse is sick, the additional work load must be picked up by the other nurses. Nursing tasks or procedures may become repetitive if work is only for ambulatory care. If a nurse is assigned to a special care unit such as intensive care, specific training is important to give confidence and to allow freedom and independence in selecting procedures to accomplish the patient care needed. Frustration can be

eliminated if the nurse can feel free to offer input for higher decisions in management and patient care.

## Leadership Effectiveness

The Leadership Effectiveness area assesses the pattern of activities and the interaction among the team members. Both other medical officers and other Air Force officers expressed a more favorable attitude than physicians and nurses in the Work Support factor. Perhaps additional duties are not perceived as interfering as much with the duties of other medical officers and other Air Force officers. On the other hand, physicians and nurses may view additional duties as taking time from more important duties, such as patient care.

In Supervisory Communications Climate, nurses were significantly lower than other medical officers in perceiving a good rapport with their supervisor. Supervisory feedback is important to let subordinates know how their performance measures up. The nurse supervisor could lack the ability to motivate subordinates by not showing consideration and support on issues within the work areas. Before nurses are placed in charge of a unit (ward), the supervisor could provide a leadership orientation program on the responsibilities of the position. This would allow confidence to build and improve the nurses' performance in contributing to the mission.

Other medical officers and other Air Force officers feel strongly that there is an open communication climate within their sections. They feel adequate information is provided to them to accomplish their mission, whereas nurses are more likely to feel information for them to do their job effectively is not adequately being disseminated. This could be rectified by supervisors having weekly staff meetings to hear important events or situations with all charge

nurses, thereby letting all nurses get the same information together. Also, the supervisor could have charge nurses air complaints from the work areas and constructively assist them with some problem-solving solutions at the same time This interchange could help other work areas that could be having the same problems.

## Unit Effectiveness

The effectiveness of the unit assesses the quantity and quality of task performance and alteration of the group's relation to the environment. It also includes changes in positions and role patterns, changes in skills and attitudes, and effects in adjustment. In this area, other medical officers scored higher overall. The physicians and other medical officers displayed a higher feeling of pride in their jobs, as compared to the nurses and other Air Force officers. This may be due to the pride they have in their roles as physicians or dentists. They also can see results from their job (e.g., patient improves, etc.).
The nurses' menial tasks would account for their having lowered feelings of pride. The supervisor should be able to increase subordinates' pride by providing challenging work assignments, positive feedback about performance, and offering personal encouragement.

Both physicians and nurses scored low in awareness of advancement opportunities that would affect their promotions. Other medical officers, however, felt very favorable toward the available opportunities they had to progress up their career ladders. The physicians and nurses have a tendency to concentrate narrowly on medical duties rather than to consider broadening their scope with available means such as PME or additional school opportunities. The supervisor should provide opportunities to staff members who are willing to

accept more responsibility by sending them to school preparing them for additional responsibilities. Recognizing individuals for jobs well done or for specific achievements, by having programs such as Physician/Nurse of the Month awards and displaying the winners' pictures in the atrium of the hospital could help make the individuals feel worthy. Patients are an excellent source to get positive feedback to staff members.

In Work Group Effectiveness, both nurses and Air Force officers were less positive than physicians and other medical officers concerning the effectiveness of their work groups. Team members are vital to produce the quality and quantity of output required to do the job. The levels of experience and compatibility of staff members to handle high priority work may at times be critical to patient care.

In General Organization Climate, both other medical officers and Air Force officers feel very strongly the organization has a strong interest in the welfare of the team member, thus making them feel motivated to contribute their best efforts to the mission. The nurses' low score could be due to a feeling the organization does not hold their job in high regard. For higher morale, an incentive program for recognizing outstanding performance could add to positive attitudes in the organization. The hospital could strengthen the physician's attitudes by providing opportunities to publish research projects or papers on current projects.

Nurses and Air Force officers scored lower in Job Related Satisfaction (e.g., in being satisfied with the factors surrounding their jobs). Other medical officers found more satisfaction in their assignments. Job satisfaction is feeling good about one's work and having a desire to continue in that role. Perhaps

those with lower scores were victims of stress (as discussed earlier). Nurses may overly concern themselves with the quality patient care which may not be provided. Also, floating to units other than that originally assigned, or shift rotation on short notice could add to stress level. These negative motivators could leave a feeling of helplessness in the job and reduced Job Related Satisfaction.

## Summary

This chapter provided possible explanations for the differences between the three medical groups and other Air Force officers. The nurses were typically lowest across all factors because they enact the "helper" role. Their goals are usually realistic, clear and achievable. Other medical officers were typically highest, perhaps because of the autonomy and enriched nature of the job. The physicians were high in Mission/Resources because of the freedom and independence they have to carry out their jobs, but expressed lower attitudes in Leadership Effectiveness. The guidance and direction the physician gets comes from the hospital commander's leadership. His leadership style to his physicians under him should encourage an open line of communication. Air Force officers were similar to nurses in the areas of Mission/Resources and Unit Effectiveness, and similiar to other medical officers in the area of Leadership Effectiveness.

Chapter Six will provide some conclusions to the study and make recommendations for medical leaders to take to improve overall job attitudes in the medical care field within the Air Force hospital environment.

## Chapter Six

## CONCLUSIONS AND RECOMMENDATIONS

This chapter briefly summarizes the results of this study and makes recommendations for medical leaders to improve the overall job attitudes within the Air Force health care system.

The results of this research indicate that at the 95% confidence level there are significant job attitudinal differences among medical officers (physicians, nurses, and other medical officers) and other Air Force officers in the LMDC Data Base. As measured by the OAP, other medical officers expressed a more positive attitude towards their jobs in the Air Force. Likewise, the physicians had a more positive attitude except in the Leadership Effectiveness area. The nurses were generally less positive on all job attitude factors. The areas of Work Support and Management and Supervision were not as high as they should be for a group with such educational and technical backgrounds. This raises the question of whether leadership is being provided to motivate this diverse group of medical personnel. Are today's medical leaders listening attentively to the physicians and nurses entering the Air Force? Thus, are medical leaders providing the guidance, direction and motivation to the medical personnel?

The respondents' replies on the OAP were neutral to slightly positive which made specific interpretations difficult on why they were dissatisfied. Future researchers should consider breaking down the diversified subjects into

specific AFSCs, such as grouping clinical nurses in one group, all internists in one group, etc. This would narrow the subjects into more homogenous groups so results can be clearly interpreted and solutions can be implemented.

The following recommendations are made to military medical managers of the present and future:

1. Hospital commanders must divorce themselves from the "bedside" role (to a certain degree) and step into a leadership role. This should include guiding younger physicians entering the medical corps, recognizing potential leadership, and rewarding physicians by encouraging advanced schooling or publishing articles for the medical journals.

2. The present nurse leaders should be made aware that their self-perception is important to younger nurses entering the Air Force. By these nurse leaders being assured of their roles, they in turn can offer positive feedback to junior nurse officers to help them grow into future leadership roles.

3. The present nurse internship program for newly commissioned nurses should be continued to orient the new nurses entering the Air Force. This offers the first stage of leadership and confidence building in their Air Force nursing careers.

4. Medical leaders should attend management courses to enhance their perspectives and to keep abreast of today's management styles.

5. Within the hospital setting, quarterly ward/department "How Goes It" meetings should be held to air problems. Some problems can be resolved while

others cannot; but if the personnel are aware that the problems are being recognized they would know management is trying on their behalf.

6. Incentive programs (such as Physician/Nurse of the Month) should be encouraged among the departments to add a sense of pride to the organization by recognizing individual contributions to the overall mission.

These recommendations are only a small number of possible areas medical managers can utilize to enhance job satisfactions within the medical career field.

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# APPENDIX

Appendix A

Analysis of Demographic Information

TABLE A-1

Sex by Medical Category

| | MDs | RNs | Other Medical | AF |
|---|---|---|---|---|
| n = | 322 | 567 | 577 | 8118 |
| Male | 92.2 | 21.7 | 90.5 | 91.7 |
| Female | 7.8 | 78.3 | 9.5 | 8.3 |

Table A-2

Age by Medical Category

| | MDs | RNs | Other Medical | AF |
|---|---|---|---|---|
| n = | 324 | 568 | 578 | 8138 |
| 21 to 20 yrs | 1.9 | 16.9 | 4.8 | 14.8 |
| 26 to 30 yrs | 27.2 | 32.7 | 23.5 | 28.0 |
| 31 to 35 yrs | 29.9 | 25.0 | 31.7 | 21.8 |
| 36 to 40 yrs | 18.8 | 13.4 | 19.4 | 18.8 |
| 41 to 45 yrs | 8.6 | 8.3 | 13.7 | 11.3 |
| 46 to 50 yrs | 7.7 | 3.0 | 5.7 | 3.5 |
| > 50 yrs | 5.9 | 0.7 | 1.2 | 1.9 |

Table A-3

Years in Air Force

| | MDs | RNs | Other Medical | AF |
|---|---|---|---|---|
| | n = 323 | 567 | 576 | 8124 |
| < 1 yr | 8.4 | 13.6 | 5.4 | 3.1 |
| 1 to 2 yrs | 9.9 | 14.5 | 7.6 | 5.4 |
| 2 to 3 yrs | 6.8 | 8.5 | 5.6 | 8.2 |
| 3 to 4 yrs | 6.5 | 10.6 | 5.2 | 7.0 |
| 4 to 8 yrs | 26.9 | 18.7 | 18.1 | 21.0 |
| 8 to 12 yrs | 20.1 | 15.9 | 17.9 | 15.7 |
| > 12 yrs | 21.4 | 18.3 | 40.3 | 39.7 |

Table A-4

Months in Present Career Field

| | MDs | RNs | Other Medical | AF |
|---|---|---|---|---|
| | n = 321 | 567 | 575 | 8071 |
| < 6 mos | 3.1 | 4.2 | 3.5 | 6.1 |
| 6 to 12 mos | 4.7 | 7.4 | 5.0 | 9.2 |
| 12 to 18 mos | 11.5 | 7.1 | 5.7 | 8.7 |
| 18 to 36 mos | 14.3 | 19.6 | 17.6 | 23.5 |
| > 36 mos | 66.4 | 61.7 | 68.2 | 52.4 |

Table A-5

Months at Present Duty Station

| | MDs | RNs | Other Medical | AF |
|---|---|---|---|---|
| n = | 321 | 568 | 577 | 8112 |
| < 6 mos | 8.4 | 12.3 | 10.7 | 13.3 |
| 6 to 12 mos | 14.3 | 19.7 | 16.3 | 15.6 |
| 12 to 18 mos | 19.6 | 14.6 | 16.3 | 15.4 |
| 18 to 36 mos | 32.7 | 31.5 | 36.4 | 36.0 |
| > 36 mos | 24.9 | 21.8 | 20.3 | 19.8 |

Table A-6

Months in Present Position

| | MDs | RNs | Other Medical | AF |
|---|---|---|---|---|
| n = | 322 | 567 | 576 | 8107 |
| < 6 mos | 14.0 | 20.6 | 14.1 | 27.7 |
| 6 to 12 mos | 16.1 | 25.0 | 19.1 | 25.0 |
| 12 to 18 mos | 21.1 | 16.4 | 18.6 | 16.6 |
| 18 to 36 mos | 32.6 | 27.9 | 33.3 | 23.9 |
| > 36 mos | 16.1 | 10.1 | 14.9 | 6.8 |

Table A-7

Ethnic Group

| | MDs | RNs | Other Medical | AF |
|---|---|---|---|---|
| n = | 322 | 566 | 576 | 8100 |
| American Indian/Alaska | 0.3 | 0.9 | 0.5 | 0.6 |
| Asian/Pacific Island | 6.8 | 2.1 | 0.7 | 1.1 |
| Black/Not Hispanic | 6.5 | 5.8 | 3.8 | 5.9 |
| Hispanic | 4.3 | 2.7 | 2.6 | 2.0 |
| White/Not Hispanic | 79.5 | 86.2 | 90.1 | 88.5 |
| Other | 2.5 | 2.3 | 2.3 | 1.9 |

Table A-8

Marital Status

| | MDs | RNs | Other Medical | AF |
|---|---|---|---|---|
| n = | 324 | 568 | 578 | 8129 |
| Not Married | 12.7 | 41.0 | 17.0 | 21.4 |
| Married | 86.7 | 54.2 | 80.8 | 77.3 |
| Single Parent | 0.6 | 4.8 | 2.2 | 1.3 |

Table A-9

Spouse Status

| | Geographically Separated | | | | Not Geographically Separated | | | |
|---|---|---|---|---|---|---|---|---|
| | MDs | RNs | Other Medical | AF | MDs | RNs | Other Medical | AF |
| n = | 14 | 21 | 16 | 246 | 267 | 287 | 451 | 6035 |
| Civilian Employed | 71.4 | 33.3 | 75.0 | 58.5 | 33.3 | 35.5 | 38.6 | 36.2 |
| Not Employed | 21.4 | 0.0 | 12.5 | 22.8 | 57.7 | 26.1 | 55.9 | 56.7 |
| Military Member | 7.1 | 66.7 | 12.5 | 18.7 | 9.0 | 38.3 | 5.5 | 7.1 |

Table A-10

Educational Level

| | MDs | RNS | Other Medical | AF |
|---|---|---|---|---|
| n = | 321 | 564 | 575 | 8122 |
| Non HS Grad | 0.0 | 0.0 | 0.0 | 0.0 |
| HS Grad or GED | 0.0 | 0.0 | 0.0 | 0.1 |
| < 2 yr College | 0.0 | 1.8 | 0.0 | 0.2 |
| > 2 yr College | 0.0 | 18.1 | 0.0 | 0.5 |
| Bachelors | 1.2 | 64.7 | 31.1 | 56.7 |
| Masters | 0.6 | 15.2 | 34.6 | 39.6 |
| PHD | 98.1 | 0.2 | 34.3 | 2.8 |

Table A-11

Professional Military Education

| | MDs | RNs | Other Medical | AF |
|---|---|---|---|---|
| n = | 324 | 568 | 578 | 8028 |
| None | 88.3 | 63.4 | 41.5 | 30.9 |
| Phase 1 or 2 | .6 | .2 | 1.9 | 1.2 |
| Phase 3 | 0.0 | 0.0 | 2.2 | 1.3 |
| Phase 4 | 0.0 | 0.0 | .7 | 1.1 |
| SNCOA/Phase 5 | 0.0 | .4 | 0.5 | 0.1 |
| SOS | 2.5 | 22.7 | 24.7 | 27.5 |
| Intermediate Svc School | 4.0 | 11.1 | 17.6 | 24.1 |
| Senior Svc School | 4.6 | 2.3 | 10.7 | 13.8 |

Table A-12

Number People Directly Supervised

| | MDs | RNs | Other Medical | AF |
|---|---|---|---|---|
| n = | 295 | 488 | 554 | 7671 |
| None | 34.2 | 42.8 | 37.2 | 45.3 |
| 1 Person | 6.4 | 7.0 | 14.1 | 6.5 |
| 2 Person | 8.1 | 7.2 | 9.7 | 5.6 |
| 3 Person | 3.7 | 7.6 | 9.4 | 8.3 |
| 4 to 5 People | 12.9 | 12.3 | 13.9 | 13.6 |
| 6 to 8 People | 15.6 | 8.2 | 8.7 | 9.5 |
| 9 or > People | 19.0 | 15.0 | 7.0 | 11.3 |

Table A-13

Number People for Whom Respondent Writes APR/OER/Appraisal

| | MDs | RNs | Other Medical | AF |
|---|---|---|---|---|
| n = | 324 | 564 | 578 | 8122 |
| None | 48.8 | 66.8 | 47.4 | 54.3 |
| 1 Person | 9.9 | 5.5 | 16.3 | 8.4 |
| 2 Person | 7.4 | 6.9 | 9.9 | 6.5 |
| 3 People | 6.8 | 5.9 | 8.0 | 7.1 |
| 4 to 5 People | 9.0 | 6.4 | 10.9 | 11.2 |
| 6 to 8 People | 12.0 | 4.8 | 5.2 | 8.2 |
| 9 or > People | 6.2 | 3.7 | 2.4 | 4.2 |

Table A-14

Supervisor Writes Respondent's APR/OER/Appraisal

| | MDs | RNs | Other Medical | AF |
|---|---|---|---|---|
| n = | 318 | 557 | 568 | 8027 |
| Yes | 79.2 | 71.1 | 80.3 | 78.3 |
| No | 6.0 | 23.0 | 11.1 | 13.4 |
| Not Sure | 14.8 | 5.9 | 8.6 | 8.2 |

Table A-15

Work Schedule

| | MDs | RNs | Other Medical | AF |
|---|---|---|---|---|
| n = | 310 | 562 | 572 | 8064 |
| Day Shift | 50.0 | 35.1 | 88.3 | 61.2 |
| Swing Shift | 0.0 | 0.5 | 0.5 | 0.1 |
| Midnight Shift | 0.0 | 0.5 | 0.0 | 0.0 |
| Rotating Shift | 1.6 | 39.0 | 0.9 | 2.7 |
| Irregular Shift | 27.7 | 19.6 | 5.4 | 12.0 |
| A Lot TDY/On-Call | 20.6 | 5.2 | 4.7 | 7.8 |
| Crew Schedule | 0.0 | 0.2 | 0.2 | 16.2 |

Table A-16

Supervisor Holds Group Meetings

| | MDs | RNs | Other Medical | AF |
|---|---|---|---|---|
| n = | 319 | 564 | 571 | 8035 |
| Never | 4.9 | 7.1 | 6.7 | 6.8 |
| Occasionally | 16.9 | 26.2 | 19.1 | 23.8 |
| Monthly | 25.1 | 44.3 | 17.5 | 10.3 |
| Weekly | 39.8 | 12.2 | 46.9 | 44.4 |
| Daily | 12.5 | 9.6 | 8.8 | 12.4 |
| Continuously | 0.9 | 0.5 | 1.1 | 2.4 |

Table A-17

Supervisor Holds Group Meetings to Solve Problems

| | MDs | RNs | Other Medical | AF |
|---|---|---|---|---|
| n = | 317 | 558 | 567 | 7993 |
| Never | 8.5 | 18.1 | 9.7 | 16.1 |
| Occasionally | 31.5 | 34.8 | 35.6 | 43.3 |
| Half the Time | 31.9 | 25.6 | 25.2 | 21.3 |
| Always | 28.1 | 21.5 | 29.5 | 19.4 |

Table A-18

Aeronautical Rating and Current Status

| | MDs | RNs | Other Medical | AF |
|---|---|---|---|---|
| n = | 325 | 568 | 577 | 8098 |
| Nonrated, not on Aircrew | 72.8 | 93.8 | 98.1 | 57.4 |
| Nonrated, now on Aircrew | 0.6 | 4.9 | 1.0 | 2.7 |
| Rated, on Crew/Ops Job | 3.7 | 0.4 | 0.0 | 29.6 |
| Rated, in Support Job | 22.9 | 0.9 | 0.9 | 10.2 |

Table A-19

Career Intent

| | MDs | RNs | Other Medical | AF |
|---|---|---|---|---|
| n = | 324 | 567 | 573 | 8087 |
| Retire 12 Mos | 1.2 | 3.2 | 2.6 | 4.1 |
| Career | 18.2 | 32.8 | 51.7 | 51.7 |
| Likely Career | 22.2 | 28.7 | 23.6 | 21.9 |
| Maybe Career | 29.0 | 22.2 | 14.5 | 14.9 |
| Likely Separate | 14.8 | 7.4 | 5.9 | 4.7 |
| Separate | 14.5 | 5.6 | 1.7 | 2.7 |

# APPENDIX

Appendix B

Comparison of Job Attitudes

Table B-1

MDs vs RNs vs Other Medical Officers vs AF Officers

| MISSION/RESOURCES | | | | | |
|---|---|---|---|---|---|
| | Mean | SD | Subset | df | F |
| Job Performance | | | | 3, 9209 | 38.40*** |
| MDs | 5.07 | .91 | 2 | | |
| RNs | 4.77 | .90 | 1 | | |
| Other Medical | 5.02 | .89 | 2 | | |
| AF Officers | 4.67 | .99 | 1 | | |
| Task Characteristics | | | | 3, 9279 | 116.20*** |
| MDs | 5.96 | .77 | 4 | | |
| RNs | 5.50 | .81 | 2 | | |
| Other Medical | 5.78 | .82 | 3 | | |
| AF Officers | 5.24 | .96 | 1 | | |
| Task Autonomy | | | | 3, 9308 | 70.38*** |
| MDs | 4.84 | 1.26 | 3 | | |
| RNs | 4.06 | 1.28 | 1 | | |
| Other Medical | 5.17 | 1.19 | 4 | | |
| AF Officers | 4.51 | 1.36 | 2 | | |
| Job Training | | | | 3, 7544 | 16.28** |
| MDs | 5.04 | 1.44 | 2 | | |
| RNs | 4.58 | 1.48 | 1 | | |
| Other Medical | 5.10 | 1.38 | 2 | | |
| AF Officers | 4.66 | 1.49 | 1 | | |

Note. Groups not in the same subset are significantly different at the .05 level.

*p<.05. **p<.01. ***p<.001.

Table B-1 (Cont.)

MDs vs RNs vs Other Medical Officers vs AF Officers

| LEADERSHIP EFFECTIVENESS | Mean | SD | Subset | df | F |
|---|---|---|---|---|---|
| Work Support | | | | 3, 9169 | 12.67*** |
| MDs | 4.32 | 1.10 | 1 | | |
| RNs | 4.44 | 1.06 | 1 | | |
| Other Medical | 4.66 | 1.08 | 2 | | |
| AF Officers | 4.62 | 1.07 | 2 | | |
| Management/Supervision | | | | 3, 8977 | 1.70 |
| MDs | 5.27 | 1.38 | 1 | | |
| RNs | 5.30 | 1.49 | 1 | | |
| Other Medical | 5.45 | 1.29 | 1 | | |
| AF Officers | 5.33 | 1.32 | 1 | | |
| Supervisory Communications Climate | | | | 3, 8786 | 3.92** |
| MDs | 4.84 | 1.40 | 1,2 | | |
| RNs | 4.73 | 1.58 | 1 | | |
| Other Medical | 5.02 | 1.39 | 2 | | |
| AF Officers | 4.89 | 1.40 | 1,2 | | |
| Organizational Communications Climate | | | | 3, 8915 | 29.95*** |
| MDs | 4.74 | 1.25 | 2 | | |
| RNs | 4.39 | 1.32 | 1 | | |
| Other Medical | 4.94 | 1.27 | 3 | | |
| AF Officers | 4.92 | 1.24 | 3 | | |

Note. Groups not in the same subset are significantly different at the .05 lesvel.

*p<.05 **p<.01 ***p<.001

Table B-1 (Cont.)

MDs vs RNs vs Other Medical Officers vs AF Officers

| UNIT EFFECTIVENESS | | | | | |
|---|---|---|---|---|---|
| | Mean | SD | Subset | df | F |
| Pride | | | | 3, 9469 | 42.33*** |
| MDs | 5.97 | 1.15 | 2 | | |
| RNs | 5.47 | 1.31 | 1 | | |
| Other Medical | 5.93 | 1.13 | 2 | | |
| AF Officers | 5.39 | 1.42 | 1 | | |
| Advancement/Recognition | | | | 3, 9082 | 20.78*** |
| MDs | 4.36 | 1.16 | 1 | | |
| RNs | 4.24 | 1.19 | 1 | | |
| Other Medical | 4.77 | 1.19 | 3 | | |
| AF Officers | 4.56 | 1.19 | 2 | | |
| Work Group Effectiveness | | | | 3, 9209 | 12.08*** |
| MDs | 5.99 | .92 | 2 | | |
| RNs | 5.71 | 1.16 | 1 | | |
| Other Medical | 5.99 | .98 | 2 | | |
| AF Officers | 5.77 | 1.08 | 1 | | |
| General Organizational Climate | | | | 3, 8975 | 40.10*** |
| MDs | 4.92 | 1.27 | 2 | | |
| RNs | 4.66 | 1.30 | 1 | | |
| Other Medical | 5.21 | 1.23 | 3 | | |
| AF Officers | 5.24 | 1.24 | 3 | | |
| Job Related Satisfaction | | | | 3, 8632 | 40.45*** |
| MDs | 5.58 | .95 | 2 | | |
| RNs | 5.31 | 1.06 | 1 | | |
| Other Medical | 5.85 | .87 | 3 | | |
| AF Officers | 5.34 | 1.10 | 1 | | |

Note. Groups not in the same subset are significantly different at the .05 level.

*p<.05. **p<.01. ***p<.001.

# APPENDIX

Appendix C

ORGANIZATIONAL ASSESSMENT PACKAGE SURVEY

FACTORS AND VARIABLES

# ORGANIZATIONAL ASSESSMENT PACKAGE SURVEY

## FACTORS AND VARIABLES

JANUARY 1986



LEADERSHIP AND MANAGEMENT DEVELOPMENT CENTER
AIR UNIVERSITY
Maxwell Air Force Base, Alabama 36112-5712

## FACTORS AND VARIABLES OF THE ORGANIZATIONAL ASSESSMENT PACKAGE

The OAP is a 109-item survey questionnaire designed jointly by the Air Force Human Resources Laboratory and the Leadership and Management Development Center (LMDC) and is used to aid LMDC in its missions to: (a) conduct research on Air Force systemic issues using information in the OAP database, (b) provide leadership and management training, and (c) provide management consultation service to Air Force commanders upon request.

Allowable responses to the attitudinal items on the survey range from 1 (low) to 7 (high). The attitudinal items are grouped into 25 factors that address such areas as the job itself, management and supervision, communications, and performance in the organization. Each data record consists of 7 externally coded descriptors and 24 demographic items as well as the responses to the 93 attitudinal items.

The factors measured by the OAP are grouped into a systems model to assess three aspects of a work group: input, process, and output (adapted from McGrath's model).

Input. In LMDC's adaptation of the model, input is comprised of demographics, work itself, and job enrichment.

A. Demographics. Descriptive or background information about the respondents to the OAP survey.

B. Work Itself. The work itself has to do with the task properties (technologies) and environmental conditions of the job. It assesses the patterns of characteristics members bring to the group or organization, and patterns of differentiation and integration among position and roles. The following OAP factors measure the work itself:

806 - Job Desires (Need For Enrichment)
810 - Job Performance Goals
812 - Task Characteristics
813 - Task Autonomy
814 - Work Repetition
816 - Desired Repetitive Easy Tasks
823 - Job Related Training
Job Influences (not a statistical factor)

C. Job Enrichment. Measures the degree to which the job itself is interesting, meaningful, challenging, and responsible. The following OAP factors measure job enrichment:

800 - Skill Variety
801 - Task Identity
802 - Task Significance
804 - Job Feedback
806 - Need for Enrichment Index (Job Desires)
807 - Job Motivation Index
808 - QJI Total Score
809 - Job Motivation Index - Additive
825 - Motivation Potential Score

Work Group Process. The work group assesses the pattern of activity and interaction among the group members. The following OAP factors measures leadership and the work group process:

805 - Performance Barriers/Blockages (Work Support)
818 - Management and Supervision
819 - Supervisory Communications Climate
820 - Organizational Communications Climate
Work Interferences (not a statistical factor)
Supervisory Assistance (not a statistical factor)

Work Group Output. Measures task performance, group development, and effects on group members. Assesses the quantity and quality of task performance and alteration of the group's relation to the environment. Assesses changes in positions and role patterns, and in the development of norms. Assesses changes on skills and attitudes, and effects on adjustment. The following OAP factors measure the work group output:

811 - Pride
817 - Advancement/Recognition
821 - Work Group Effectiveness (Perceived Productivity)
822 - Job Related Satisfaction
824 - General Organizational Climate

### EXTERNALLY CODED DESCRIPTORS

Batch Number

Julian Date of Survey

Major Command

Base Code

Consultation Method

Consultant Code

Survey Version

(Note: These items are concatenated to each data record during EDP processing.)

## DEMOGRAPHIC ITEMS (NOT A STATISTICAL FACTOR)

| Variable Number | Statement Number | Statement |
|---|---|---|
| - | - | Supervisor's Code |
| - | - | Work Group Code |
| - | - | Sex |
| - | - | Your age is |
| - | - | You are (officer, enlisted, GS, etc.) |
| - | - | Your pay grade is |
| - | - | Primary AFSC |
| - | - | Duty AFSC |

(Note: The above items are on the response sheet.)

001 - (Not used)

002 - (Not used)

003 1 Total years in the Air Force:

1. Less than 1 year
2. More than 1 year, less than 2 years
3. More than 2 years, less than 3 years
4. More than 3 years, less than 4 years
5. More than 4 years, less than 8 years
6. More than 8 years



| Variable Number | Statement Number | Statement |
|---|---|---|
| 004 | 2 | Total months in present career field: |

1. Less than 1 month
2. More than 1 month, less than 6 months
3. More than 6 months, less than 12 months
4. More than 12 months, less than 18 months
5. More than 18 months, less than 24 months
6. More than 24 months, less than 36 months
7. More than 36 months

005 3 Total months at this station:

1. Less than 1 month
2. More than 1 month, less than 6 months
3. More than 6 months, less than 12 months
4. More than 12 months, less than 18 months
5. More than 18 months, less than 24 months
6. More than 24 months, less than 36 months
7. More than 36 months

006 4 Total months in present position:

1. Less than 1 month
2. More than 1 month, less than 6 months
3. More than 6 months, less than 12 months
4. More than 12 months, less than 18 months
5. More than 18 months, less than 24 months
6. More than 24 months, less than 36 months
7. More than 36 months

007 5 Your Ethnic Group is:

1. American Indian or Alaskan Native
2. Asian or Pacific Islander
3. Black, not of Hispanic Origin
4. Hispanic
5. White, not of Hispanic Origin
6. Other

008 11 Which of the following "best" describes your marital status?

0. Not married.
1. Married: Spouse is a civilian employed outside home.
2. Married: Spouse is a civilian employed outside home - geographically separated.
3. Married: Spouse not employed outside home.
4. Married: Spouse not employed outside home - geographically separated.
5. Married: Spouse is a military member.
6. Married: Spouse is a military member - geographically separated.
7. Single parent.

| Variable Number | Statement Number | Statement |
|---|---|---|
| 009 | 6 | Your highest education level obtained is:<br><br>1. Non-high school graduate<br>2. High school graduate or GED<br>3. Less than two years college<br>4. Two years or more college<br>5. Bachelors Degree<br>6. Masters Degree<br>7. Doctoral Degree |
| 010 | 7 | Highest level of professional military education (residence or correspondence):<br><br>0. None or not applicable<br>1. NCO Orientation Course or USAF Supervisor Course (NCO Phase 1 or 2)<br>2. NCO Leadership School (NCO Phase 3)<br>3. NCO Academy (NCO Phase 4)<br>4. Senior NCO Academy (NCO Phase 5)<br>5. Squadron Officer School<br>6. Intermediate Service School (i.e., ACSC, AFSC)<br>7. Senior Service School (i.e., AWC, ICAF, NWC) |
| 011 | 8 | How many people do you directly supervise?<br><br>1. None 5. 4 to 5<br>2. 1 6. 6 to 8<br>3. 2 7. 9 or more<br>4. 3 |
| 012 | 9 | For how many people do you write performance reports?<br><br>1. None 5. 4 to 5<br>2. 1 6. 6 to 8<br>3. 2 7. 9 or more<br>4. 3 |
| 013 | 10 | Does your supervisor actually write your performance report?<br><br>1. Yes 2. No 3. Not sure |



| Variable Number | Statement Number | Statement |
|---|---|---|
| 014 | 11 | Your work requires you to work primarily:<br><br>1. Alone<br>2. With one or two people<br>3. As a small work group (3-5 people)<br>4. As a large work group (6 or more people)<br>5. Other |
| 015 | 12 | What is your usual work schedule?<br><br>1. Day shift, normally stable hours<br>2. Swing shift (about 1600-2400)<br>3. Mid shift (about 2400-0800)<br>4. Rotating shift schedule<br>5. Day or shift work with irregular/unstable hours<br>6. Frequent TDY/travel or frequently on-call to report to work<br>7. Crew schedule |
| 016 | 13 | How often does your supervisor hold group meetings?<br><br>1. Never 4. Weekly<br>2. Occasionally 5. Daily<br>3. Monthly 6. Continuously |
| 017 | 14 | How often are group meetings used to solve problems and establish goals?<br><br>1. Never 3. About half the time<br>2. Occasionally 4. All of the time |
| 018 | 15 | What is your aeronautical rating and current status?<br><br>1. Nonrated, not on aircrew<br>2. Nonrated, now on aircrew<br>3. Rated, in crew/operations job<br>4. Rated, in support job |

| Variable Number | Statement Number | Statement |
|---|---|---|
| 019 | 16 | Which of the following best describes your career or employment intentions?<br><br>1. Planning to retire in the next 12 months<br>2. Will continue in/with the Air Force as a career<br>3. Will most likely continue in/with the Air Force<br>4. May continue in/with the Air Force<br>5. Will most likely not make the Air Force a career<br>6. Will separate/terminate from the Air Force as soon as possible |

NOTE: Variable 008, Statement 11 was added to the OAP on 19 Jan 80 and replaced variable 014 which appears on page 6. Although no longer used, Variable 014 is still shown because data collected from about 25,000 samples for this variable are still in the data base.





## FACTORS

Each 800 series factor consists of two or more variables which correspond to statements in the OAP. A mean score can be derived for each factor except 805, 807, 808, 809 and 825 by using a "straight average." The formula for computing the exceptions is indicated.

FACTOR 800 - SKILL VARIETY: Measures the degree to which a job requires a variety of different tasks or activities in carrying out the work; involves the use of a number of different skills and talents of the worker; skills required are valued by the worker.

| Variable Number | Statement Number | Statement |
|---|---|---|
| 201 | 17 | To what extent does your job require you to do many different things, using a variety of your talents and skills? |
| 212 | 29 | To what extent does your job require you to use a number of complex skills? |

FACTOR 801 - TASK IDENTITY: Measures the degree to which the job requires completion of a "whole" and identifiable piece of work from beginning to end.

| Variable Number | Statement Number | Statement |
|---|---|---|
| 202 | 18 | To what extent does your job involve doing a whole task or unit of work? |
| 211 | 28 | To what extent does your job provide you with a chance to finish completely the piece of work you have begun? |

FACTOR 802 - TASK SIGNIFICANCE: Measures the degree to which the job has a substantial impact on the lives or work of others; the importance of the job.

| Variable Number | Statement Number | Statement |
|---|---|---|
| 203 | 19 | To what extent is your job significant in that it affects others in some important way? |
| 210 | 27 | To what extent does doing your job well affect a lot of people? |

FACTOR 803 (NOT USED)

FACTOR 804 - JOB FEEDBACK: Measures the degree to which carrying out the work activities required by the job results in the worker obtaining clear and direct information about job outcomes or information on good and poor performance.

| Variable Number | Statement Number | Statement |
|---|---|---|
| 272 | 22 | To what extent are you able to determine how well you are doing your job without feedback from anyone else? |
| 209 | 26 | To what extent does your job provide the chance to know for yourself when you do a good job, and to be responsible for your own work? |

FACTOR 805 - WORK SUPPORT: Measures the degree to which work performance is hindered by additional duties, details, inadequate tools, equipment, or work space.

| Variable Number | Statement Number | Statement |
|---|---|---|
| 206 | 23 | To what extent do additional duties interfere with the performance of your primary job? |
| 207 | 24 | To what extent do you have adequate tools and equipment to accomplish your job? |
| 208 | 25 | To what extent is the amount of work space provided adequate? |

Formula (8-206+207+208)/3



FACTOR 806 - NEED FOR ENRICHMENT INDEX (JOB DESIRES): Has to do with job related characteristics (autonomy, personal growth, use of skills, etc.) that the individual would like in a job.

| Variable Numoer | Statement Number | Statement |
|---|---|---|
| (In my job, I would like to have the characteristics described--from "not at all" to "an extremely large amount") | | |
| 249 | 51 | Opportunities to have independence in my work. |
| 250 | 52 | A job that is meaningful. |
| 251 | 53 | The opportunity for personal growth in my job. |
| 252 | 54 | Opportunities in my work to use my skills. |
| 253 | 55 | Opportunities to perform a variety of tasks. |

FACTOR 807 - JOB MOTIVATION INDEX: A composite index derived from the six job characteristics that reflects the overall "motivating potential" of a job; the degree to which a job will prompt high internal work motivation on the part of job encumbents.

Index is computed using the following factors:

| | |
|---|---|
| 800 | Skill variety |
| 801 | Task identity |
| 802 | Task significance |
| 805 | Performance barriers/blockages |
| 813 | Task autonomy |
| 804 | Job feedback |

Formula ( (800+801+802+805)/4)*813*804

FACTOR 808 - OJI TOTAL SCORE: Assesses one's perception of motivation provided by his or her job. This factor is a variation of a scale employed by other job motivation theorists.

Score is computed using the variables in the following formula:

Formula (V201+V202+V203+V270+V271+V272
+8-V206+V207+V208+V209+V210
+V211+V212+V213)

FACTOR 809 - JOB MOTIVATION INDEX ---- ADDITIVE: This factor is a variation of a scale employed by other job motivation theorists.

Index is computed using the following factors:

| | |
|---|---|
| 800 | Skill variety |
| 801 | Task identity |
| 802 | Task significance |
| 805 | Performance barriers/blockages |
| 813 | Task autonomy |
| 804 | Work repetition |

Formula ( (800+801+802+805)/4)+813+804

FACTOR 810 - JOB PERFORMANCE GOALS: Measures the extent to which job performance goals are clear, specific, realistic, understandable, and challenging.

| Variable Number | Statement Number | Statement |
|---|---|---|
| 217 | 34 | To what extent do you know exactly what is expected of you in performing your job? |
| 218 | 35 | To what extent are your job performance goals difficult to accomplish? |
| 273 | 36 | To what extent are your job performance goals clear? |
| 274 | 37 | To what extent are your job performance goals specific? |
| 221 | 38 | To what extent are your job performance goals realistic? |

FACTOR 811 - PRIDE: Measures the pride in one's work.

| Variable Number | Statement Number | Statement |
|---|---|---|
| 215 | 32 | To what extent are you proud of your job? |
| 275 | 46 | To what extent does your work give you a feeling of pride? |





FACTOR 812 - TASK CHARACTERISTICS: A combination of skill variety, task identity, task significance, and job feedback designed to measure several aspects of one's job.

| Variable Number | Statement Number | Statement |
|---|---|---|
| 201 | 17 | To what extent does your job require you to do many different things, using a variety of your talents and skills? |
| 202 | 18 | To what extent does your job involve doing a whole task or unit of work? |
| 203 | 19 | To what extent is your job significant, in that it affects others in some important way? |
| 272 | 22 | To what extent are you able to determine how well you are doing your job without feedback from anyone else? |
| 209 | 26 | To what extent does your job provide the chance to know for yourself when you do a good job, and to be responsible for your own work? |
| 210 | 27 | To what extent does doing your job well affect a lot of people? |
| 211 | 28 | To what extent does your job provide you with a chance to finish completely the piece of work you have begun? |
| 212 | 29 | To what extent does your job require you to use a number of complex skills? |

FACTOR 813 - TASK AUTONOMY: Measures the degree to which the job provides freedom to do the work as one sees fit; discretion in scheduling, decision making, and means for accomplishing a job.

| Variable Number | Statement Number | Statement |
|---|---|---|
| 270 | 20 | To what extent does your job provide a great deal of freedom and independence in scheduling your work? |
| 271 | 21 | To what extent does your job provide a great deal of freedom and independence in selecting your own procedures to accomplish it? |
| 213 | 30 | To what extent does your job give you freedom to do your work as you see fit? |
| 214 | 31 | To what extent are you allowed to make the major decisions required to perform your job well? |

FACTOR 814 - WORK REPETITION: Measures the extent to which one performs the same tasks or faces the same type of problems in his or her job on a regular basis.

| Variable Number | Statement Number | Statement |
|---|---|---|
| 226 | 39 | To what extent do you perform the same tasks repeatedly within a short period of time? |
| 227 | 40 | To what extent are you faced with the same type of problem on a weekly basis? |

FACTOR 815 (NOT USED)

FACTOR 816 - DESIRED REPETITIVE EASY TASKS: Measures the extent to which one desires his or her job involve repetitive tasks or tasks that are easy to accomplish.

| Variable Number | Statement Number | Statement |
|---|---|---|
| 255 | 56 | A job in which tasks are repetitive. |
| 258 | 57 | A job in which tasks are relatively easy to accomplish. |

FACTOR - JOB INFLUENCES (NOT A STATISTICAL FACTOR):

| Variable Number | Statement Number | Statement |
|---|---|---|
| 216 | 33 | To what extent do you feel accountable to your supervisor in accomplishing your job? |
| 238 | 42 | To what extent do co-workers in your work group maintain high standards of performance? |

FACTOR 817 - ADVANCEMENT/RECOGNITION: Measures one's awareness of advancement and recognition, and feelings of being prepared (i.e., learning new skills for promotion).

| Variable Number | Statement Number | Statement |
|---|---|---|
| 234 | 41 | To what extent are you aware of promotion/advancement opportunities that affect you? |
| 239 | 43 | To what extent do you have the opportunity to progress up your career ladder? |



| | | |
|---|---|---|
| 240 | 44 | To what extent are you being prepared to accept increased responsibility? |
| 241 | 45 | To what extent do people who perform well receive recognition? |
| 276 | 47 | To what extent do you have the opportunity to learn skills which will improve your promotion potential? |

FACTOR 818 - MANAGEMENT and SUPERVISION (A): Measures the degree to which the worker has high performance standards and good work procedures. Measures support and guidance received, and the overall quality of supervision.

| Variable Number | Statement Number | Statement |
|---|---|---|
| 404 | 58 | My supervisor is a good planner. |
| 405 | 59 | My supervisor sets high performance standards. |
| 410 | 60 | My supervisor encourages teamwork. |
| 411 | 61 | My supervisor represents the group at all times. |
| 412 | 62 | My supervisor establishes good work procedures. |
| 413 | 63 | My supervisor has made his responsibilities clear to the group. |
| 445 | 64 | My supervisor fully explains procedures to each group member. |
| 416 | 65 | My supervisor performs well under pressure. |

FACTOR - MANAGEMENT and SUPERVISION (B): (NOT A STATISTICAL FACTOR)

| Variable Number | Statement Number | Statement |
|---|---|---|
| 424 | 66 | My supervisor takes time to help me when needed. |
| 434 | 71 | My supervisor lets me know when I am doing a poor job. |
| 439 | 75 | When I need technical advice, I usually go to my supervisor. |

FACTOR 819 - SUPERVISORY COMMUNICATIONS CLIMATE: Measures the degree to which the worker perceives that there is good rapport with supervisors, that there is a good working environment, that innovation for task improvement is encouraged, and that rewards are based upon performance.

| Variable Number | Statement Number | Statement |
|---|---|---|
| 426 | 67 | My supervisor asks members for their ideas on task improvements. |
| 428 | 68 | My supervisor explains how my job contributes to the overall mission. |
| 431 | 69 | My supervisor helps me set specific goals. |
| 433 | 70 | My supervisor lets me know when I am doing a good job. |
| 435 | 72 | My supervisor always helps me improve my performance. |
| 436 | 73 | My supervisor insures that I get job related training when needed. |
| 437 | 74 | My job performance has improved due to feedback received from my supervisor. |
| 442 | 76 | My supervisor frequently gives me feedback on how well I am doing my job. |

FACTOR 820 - ORGANIZATIONAL COMMUNICATIONS CLIMATE: Measures the degree to which the worker perceives that there is an open communications environment in the organization, and that adequate information is provided to accomplish the job.

| Variable Number | Statement Number | Statement |
|---|---|---|
| 300 | 82 | Ideas developed by my work group are readily accepted by management personnel above my supervisor. |
| 301 | 83 | My organization provides all the necessary information for me to do my job effectively. |
| 302 | 84 | My organization provides adequate information to my work group. |
| 303 | 85 | My work group is usually aware of important events and situations. |
| 304 | 86 | My complaints are aired satisfactorily. |
| 309 | 91 | The information in my organization is widely shared so that those needing it have it available. |





| | | |
|---|---|---|
| 314 | 96 | My organization has clear-cut goals. |
| 317 | 99 | The goals of my organization are reasonable. |
| 318 | 100 | My organization provides accurate information to my work group. |

FACTOR 821 - WORK GROUP EFFECTIVENESS: Measures one's view of the quantity, quality, and efficiency of work generated by his or her work group.

| Variable Number | Statement Number | Statement |
|---|---|---|
| 259 | 77 | The quantity of output of your work group is very high. |
| 260 | 78 | The quality of output of your work group is very high. |
| 261 | 79 | When high priority work arises, such as short suspenses, crash programs, and schedule changes, the people in my work group do an outstanding job in handling these situations. |
| 264 | 80 | Your work group always gets maximum output from available resources (e.g., personnel and material). |
| 265 | 81 | Your work group's performance in comparison to similar work groups is very high. |

FACTOR - WORK INTERFERENCES (NOT A STATISTICAL FACTOR): Identifies things that impede an individual's job performance.

| Variable Number | Statement Number | Statement |
|---|---|---|
| 277 | 48 | To what extent do you have the necessary supplies to accomplish your job? |
| 278 | 49 | To what extent do details (task not covered by primary or additional duty descriptions) interfere with the performance of your primary job? |
| 279 | 50 | To what extent does a bottleneck in your organization seriously affect the flow of work either to or from your group? |

FACTOR 822 - JOB RELATED SATISFACTION: Measures the degree to which the worker is generally satisfied with factors surrounding the job.

| Variable Number | Statement Number | Statement |
|---|---|---|
| 705 | 101 | Feeling of Helpfulness<br>The chance to help people and improve their welfare through the performance of my job. The importance of my job performance to the welfare of others. |
| 709 | 102 | Co-worker Relationships<br>My amount of effort compared to the effort of my co-workers, the extent to which my co-workers share the load, and the spirit of teamwork which exists among my co-workers. |
| 710 | 103 | Family Attitude Toward Job<br>The recognition and the pride my family has in the work I do. |
| 717 | 106 | Work Schedule<br>My work schedule; flexibility and regularity of my work schedule; the number of hours I work per week. |
| 718 | 107 | Job Security |
| 719 | 108 | Acquired Valuable Skills<br>The chance to acquire valuable skills in my job which prepare me for future opportunities |
| 723 | 109 | My Job as a Whole |

FACTOR 823 - JOB RELATED TRAINING: Measures the extent to which one is satisfied with on-the-job and technical training received.

| Variable Number | Statement Number | Statement |
|---|---|---|
| 711 | 104 | On-the-Job Training (OJT)<br>The OJT instructional methods and instructors' competence. |
| 712 | 105 | Technical Training (Other than OJT)<br>The technical training I have received to perform my current job. |





FACTOR 824 - GENERAL ORGANIZATIONAL CLIMATE: Measures the individual's perception of his or her organizational environment as a whole (i.e. spirit of teamwork, communications, organizational pride, etc.).

| Variable Number | Statement Number | Statement |
|---|---|---|
| 305 | 87 | My organization is very interested in the attitudes of the group members toward their jobs. |
| 306 | 88 | My organization has a very strong interest in the welfare of its people. |
| 307 | 89 | I am very proud to work for this organization. |
| 308 | 90 | I feel responsible to my organization in accomplishing its mission. |
| 310 | 92 | Personnel in my unit are recognized for outstanding performance. |
| 311 | 93 | I am usually given the opportunity to show or demonstrate my work to others. |
| 312 | 94 | There is a high spirit of teamwork among my co-workers. |
| 313 | 95 | There is outstanding cooperation between work groups of my organization. |
| 315 | 97 | I feel motivated to contribute my best efforts to the mission of my organization. |
| 316 | 98 | My organization rewards individuals based on performance. |

FACTOR 825 - MOTIVATION POTENTIAL SCORE: This factor is another variation of a scale employed by other job motivation theorists. The score ranges between 1 and 343 with 109 being the Air Force average. Low scores indicate a poorly motivating job. Score is computed using the following factors:

| | |
|---|---|
| 800 | Skill variety |
| 801 | Task identity |
| 802 | Task significance |
| 804 | Job feedback |
| 813 | Task autonomy |

Formula ( (800+801+802)/3)*813*804

VARIABLES

| Variable Number | Factor | Statement Number | Statement |
|---|---|---|---|
| 201 | 800/812 | 17 | To what extent does your job require you to do many different things, using a variety of your talents and skills? |
| 202 | 801/812 | 18 | To what extent does your job involve doing a whole task or unit of work? |
| 203 | 802/812 | 19 | To what extent is your job significant, in that it affects others in some important way? |
| 204 & 205 | -- | -- | (Not used) |
| 206 | 805 | 23 | To what extent do additional duties interfere with the performance of your primary job? |
| 207 | 805 | 24 | To what extent do you have adequate tools and equipment to accomplish your job? |
| 208 | 805 | 25 | To what extent is the amount of work space provided adequate? |
| 209 | 804/812 | 26 | To what extent does your job provide the chance to know for yourself when you do a good job, and to be responsible for your own work? |
| 210 | 802/812 | 27 | To what extent does doing your job well affect a lot of people? |
| 211 | 801/812 | 28 | To what extent does your job provide you with a chance to finish completely the piece of work you have begun? |
| 212 | 800/812 | 29 | To what extent does your job require you to use a number of complex skills? |



| Variable Number | Factor | Statement Number | Statement |
|---|---|---|---|
| 213 | 813 | 30 | To what extent does your job give you freedom to do your work as you see fit? |
| 214 | 813 | 31 | To what extent are you allowed to make the major decisions required to perform your job well? |
| 215 | 811 | 32 | To what extent are you proud of your job? |
| 216* | -- | 33 | To what extent do you feel accountable to your supervisor in accomplishing your job? |
| 217 | 810 | 34 | To what extent do you know exactly what is expected of you in performing your job? |
| 218 | 810 | 35 | To what extent are your job performance goals difficult to accomplish? |
| 219 & 220 | -- | -- | (Not used) |
| 221 | 810 | 38 | To what extent are your job performance goals realistic? |
| 222-225 | -- | -- | (Not used) |
| 226 | 814 | 39 | To what extent do you perform the same tasks repeatedly within a short period of time? |
| 227 | 814 | 40 | To what extent are you faced with the same type of problem on a weekly basis? |

* This variable is an element of "job influences" (not a statistical factor).

| Variable Number | Factor | Statement Number | Statement |
|---|---|---|---|
| 228-233 | -- | -- | (Not used) |
| 234 | 817 | 41 | To what extent are you aware of promotion/advancement opportunities that affect you? |
| 235-237 | -- | -- | (Not used) |
| 238* | -- | 42 | To what extent do co-workers in your work group maintain high standards of performance? |
| 239 | 817 | 43 | To what extent do you have the opportunity to progress up your career ladder? |
| 240 | 817 | 44 | To what extent are you being prepared to accept increased responsibility? |
| 241 | 817 | 45 | To what extent do people who perform well receive recognition? |
| 242-248 | -- | -- | (Not used) |
| 249 | 806 | 51 | Opportunities to have independence in my work? |
| 250 | 806 | 52 | A job that is meaningful. |
| 251 | 806 | 53 | The opportunity for personal growth in my job. |
| 252 | 806 | 54 | Opportunities in my work to use my skills. |
| 253 | 806 | 55 | Opportunities to perform a variety of tasks. |
| 254 | -- | -- | (Not used) |
| 255 | 816 | 56 | A job in which tasks are repetitive. |

* This variable is an element of "Job influences" (not a statistical factor).



| Variable Number | Factor | Statement Number | Statement |
|---|---|---|---|
| 256 & 257 | -- | -- | (Not used) |
| 258 | 816 | 57 | A job in which tasks are relatively easy to accomplish. |
| 259 | 821 | 77 | The quantity of output of your work group is very high. |
| 260 | 821 | 78 | The quality of output of your work group is very high. |
| 261 | 821 | 79 | When high priority work arises, such as short suspenses, crash programs, and schedule changes, the people in my work group do an outstanding job in handling these situations. |
| 262 & 263 | -- | -- | (Not used) |
| 264 | 821 | 80 | Your work group always gets maximum output from available resources (e.g., personnel and material). |
| 265 | 821 | 81 | Your work group's performance in comparison to similar work groups is very high. |
| 266-269 | -- | -- | (Not used) |
| 270 | 813 | 20 | To what extent does your job provide a great deal of freedom and independence in scheduling your work? |
| 271 | 813 | 21 | To what extent does your job provide a great deal of freedom and independence in selecting your own procedures to accomplish it? |
| 272 | 804/812 | 22 | To what extent are you able to determine how well you are doing your job without feedback from anyone else? |

| Variable Number | Factor | Statement Number | Statement |
|---|---|---|---|
| 273 | 810 | 36 | To what extent are your job performance goals clear? |
| 274 | 810 | 37 | To what extent are your job performance goals specific? |
| 275 | 811 | 46 | To what extent does your work give you a feeling of pride? |
| 276 | 817 | 47 | To what extent do you have the opportunity to learn skills which will improve your promotion potential? |
| 277** | -- | 48 | To what extent do you have the necessary supplies to accomplish your job? |
| 278** | -- | 49 | To what extent do details (task not covered by primary or additional duty descriptions) interfere with the performance of your primary job? |
| 279** | -- | 50 | To what extent does a bottleneck in your organization seriously affect the flow of work either to or from your group? |
| 280-299 | -- | -- | (Not used) |
| 300 | 820 | 82 | Ideas developed by my work group are readily accepted by management personnel above my supervisor. |
| 301 | 820 | 83 | My organization provides all the necessary information for me to do my job effectively. |
| 302 | 820 | 84 | My organization provides adequate information to my work group. |

** These variables are elements of "work interferences" (not a statistical factor).



| Variable Number | Factor | Statement Number | Statement |
|---|---|---|---|
| 303 | 820 | 85 | My work group is usually aware of important events and situations. |
| 304 | 820 | 86 | My complaints are aired satisfactorily. |
| 305 | 824 | 87 | My organization is very interested in the attitudes of the group members toward their jobs. |
| 306 | 824 | 88 | My organization has a very strong interest in the welfare of its people. |
| 307 | 824 | 89 | I am very proud to work for this organization. |
| 308 | 824 | 90 | I feel responsible to my organization in accomplishing its mission. |
| 309 | 820 | 91 | The information in my organization is widely shared so that those needing it have it available. |
| 310 | 824 | 92 | Personnel in my unit are recognized for outstanding performance. |
| 311 | 824 | 93 | I am usually given the opportunity to show or demonstrate my work to others. |
| 312 | 824 | 94 | There is a high spirit of teamwork among my co-workers. |
| 313 | 824 | 95 | There is outstanding cooperation between work groups of my organization. |

| Variable Number | Factor | Statement Number | Statement |
|---|---|---|---|
| 314 | 820 | 96 | My organization has clear-cut goals. |
| 315 | 824 | 97 | I feel motivated to contribute my best efforts to the mission of my organization. |
| 316 | 824 | 98 | My organization rewards individuals based on performance. |
| 317 | 820 | 99 | The goals of my organization are reasonable. |
| 318 | 820 | 100 | My organization provides accurate information to my work group. |
| 319-403 | -- | -- | (Not used) |
| 404 | 818 | 58 | My supervisor is a good planner. |
| 405 | 818 | 59 | My supervisor sets high performance standards. |
| 406-409 | -- | -- | (Not used) |
| 410 | 818 | 60 | My supervisor encourages teamwork. |
| 411 | 818 | 61 | My supervisor represents the group at all times. |
| 412 | 818 | 62 | My supervisor establishes good work procedures. |
| 413 | 818 | 63 | My supervisor has made his responsibilities clear to the group. |
| 414 & 415 | -- | -- | (Not used) |
| 416 | 818 | 65 | My supervisor performs well under pressure. |
| 417-423 | -- | -- | (Not used) |
| 424*** | -- | 66 | My supervisor takes time to help me when needed. |
| 425 | -- | -- | (Not used) |

*** This variable is an element of "supervisory assistance" (not a statistical factor).



| Variable Number | Factor | Statement Number | Statement |
|---|---|---|---|
| 426 | 819 | 67 | My supervisor asks members for their ideas on task improvements. |
| 427 | -- | -- | (Not used) |
| 428 | 819 | 68 | My supervisor explains how my job contributes to the overall mission. |
| 429 & 430 | -- | -- | (Not used) |
| 431 | 819 | 69 | My supervisor helps me set specific goals. |
| 432 | -- | -- | (Not used) |
| 433 | 819 | 70 | My supervisor lets me know when I am doing a good job. |
| 434*** | -- | 71 | My supervisor lets me know when I am doing a poor job. |
| 435 | 819 | 72 | My supervisor always helps me improve my performance. |
| 436 | 819 | 73 | My supervisor insures that I get job related training when needed. |
| 437 | 819 | 74 | My job performance has improved due to feedback received from my supervisor. |
| 438 | -- | -- | (Not used) |
| 439*** | -- | 75 | When I need technical advice, I usually go to my supervisor. |
| 440 & 441 | -- | -- | (Not used) |
| 442 | 819 | 76 | My supervisor frequently gives me feedback on how well I am doing my job. |
| 443 & 444 | -- | -- | (Not used) |
| 445 | 818 | 64 | My supervisor fully explains procedures to each group member. |
| 446-704 | -- | -- | (Not used) |

*** These variables are elements of "supervisory assistance" (not a statistical factor).

| Variable Number | Factor | Statement Number | Statement |
|---|---|---|---|
| 705 | 822 | 101 | Feeling of Helpfulness<br>The chance to help people and improve their welfare through the performance of my job. The importance of my job performance to the welfare of others. |
| 706-708 | -- | -- | (Not used) |
| 709 | 822 | 102 | Co-worker Relationships<br>My amount of effort compared to the effort of my co-workers, the extent to which my co-workers share the load, and the spirit of teamwork which exists among my co-workers. |
| 710 | 822 | 103 | Family Attitude Toward Job<br>The recognition and the pride my family has in the work I do. |
| 711 | 823 | 104 | On-the-Job Training (OJT)<br>The OJT instructional methods and instructors' competence. |
| 712 | 823 | 105 | Technical Training (Other than OJT)<br>The technical training I have received to perform my current job. |
| 713-716 | -- | -- | (Not used) |
| 717 | 822 | 106 | Work Schedule<br>My work schedule; flexibility and regularity of my work schedule; the number of hours I work per week. |
| 718 | 822 | 107 | Job Security |
| 719 | 822 | 108 | Acquired Valuable Skills<br>The chance to acquire valuable skills in my job which prepare me for future opportunities. |
| 720-722 | -- | -- | (Not used) |
| 723 | 822 | 109 | My Job as a Whole |
| 724-999 | -- | -- | (Not used) |

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